

THE COMMONWEALTH OF MASSACHUSETTS  
CITY OF LOWELL

In City Council

LOAN ORDER

IT IS ORDERED BY THE CITY COUNCIL OF THE CITY OF LOWELL BY A TWO-THIRDS VOTE OF ALL OF ITS MEMBERS, as follows:

**Ordered:** That the sum of \$175,000,000 is appropriated for the purpose of financing sewer separation projects or other sewer infrastructure replacement projects, including any architectural, engineering, legal or other costs incidental or related thereto, and to meet this appropriation, the City Treasurer, with the approval of the City Manager, is authorized to borrow said amount under and pursuant to M.G.L. c. 44, and/or c. 29C, or pursuant to any other enabling authority, and to issue bonds or notes of the City therefor; that such bonds or notes shall be general obligations of the City unless the Treasurer with the approval of the City Manager determines that they should be issued as limited obligations and may be secured by local system revenues as defined in Section 1 of Chapter 29C; that the Treasurer with the approval of the City Manager is authorized to borrow all or a portion of such amount from the Massachusetts Clean Water Trust established pursuant to Chapter 29C and in connection therewith to enter into a financing agreement and/or security agreement with the Trust and otherwise to contract with the Trust and the Department of Environmental Protection with respect to such loan and for any federal or state aid available for the project or for the financing thereof; and that the City Manager is authorized to enter into a project regulatory agreement with the Department of Environmental Protection; that the City Manager is authorized to contract for and expend any federal or state aid available for such projects; that the City Manager is authorized to take any action necessary or convenient to carry out the projects; and that the City Treasurer is authorized to file an application with the appropriate officials of The Commonwealth of Massachusetts (the "Commonwealth") to qualify under Chapter 44A of the General Laws any and all bonds of the city authorized by this order, and to provide such information and execute such documents as such officials of the Commonwealth may require in connection therewith.



# Lowell Regional Wastewater Utility

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Aaron Fox  
*Executive Director*

## MEMORANDUM

**TO:** Thomas A. Golden Jr., City Manager

**FROM:** Aaron Fox, Wastewater Executive Director 

**DATE:** May 15, 2024

**SUBJECT:** **Loan Authorization Request for Consent Decree Compliance**

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I am writing to inform you that the City of Lowell is obligated to comply with the newly executed EPA Consent Decree, which enforces Clean Water Act (CWA) regulations through the mitigation of combined sewer overflows (CSOs). In order to execute the necessary work associated with the Consent Decree and National Pollutant Discharge Elimination System (NPDES) permit regulations, the Wastewater Utility is requesting a loan authorization of \$175,000,000. It's important to note that the EPA and Department of Justice oversee environmental enforcement nationwide. In our region similar CSO mitigation projects have been inclusions in municipal consent decrees for major wastewater facilities along the Merrimack River. The City remains committed to environmental protection and public health and has been actively working towards compliance with the Consent Decree.

Under the terms of the EPA consent decree and NPDES permit, the City is mandated to undertake several significant initiatives. These include extensive sewer separation projects in key areas around the city such as Centralville and other combined sewer areas prone to sewer surcharging and CSOs; upgrades to current treatment plant processes to ensure compliance with discharge regulations; implement improvements to mitigate flooding on Douglas Road and Windward Road; develop and execute stormwater management initiatives; enhancing the Capacity, Management, Operation, and Maintenance of the existing collection system; and formulating a comprehensive long-term control plan for future phases of CSO mitigation efforts.

The \$175 million loan authorization will fund these initiatives for the next 5 to 6 years. Figure 1 shows a timeline of the Wastewater Capital Expenditure projects from 2024 through 2029. Additionally, the figure illustrates the estimated individual cost of each program.

YEAR	2024	2025	2026	2027	2028	2029
<b>Collection System Maintenance Improvements (\$2.5 Million)</b>						
CMOM Program Updates	[Bar spanning 2024-2029]					
<b>Infiltration/Inflow Program (\$12 Million)</b>						
I/I Design/Construction	[Bar spanning 2024-2029]					
<b>Centralville Sewer Separation Project (\$70 Million)</b>						
Phase 1 Design/Construction	[Bar spanning 2024-2027]					
Phase 2 Design/Construction					[Bar spanning 2028-2029]	
<b>Phase 3 Sewer Separation Program (\$43.5 Million)</b>						
Project 1 Design/Construction		[Bar spanning 2025-2028]				
Project 2 Design/Construction			[Bar spanning 2026-2029]			
Project 3 Design/Construction					[Bar spanning 2028-2029]	
<b>Wentworth-Douglas Road Underground Storage Tank (\$14 Million)</b>						
Design/Construction	[Bar spanning 2024-2025]					
<b>Duck Island Wastewater Treatment Plant Upgraders (\$29.5 Million)</b>						
Design/Construction	[Bar spanning 2024-2026]					
<b>Stormwater Compliance Program (\$3.5 Million)</b>						
IDDE/Phosphorus/ Field Support	[Bar spanning 2024-2029]					

Figure 1 Lowell Wastewater Design and Construction Schedule

The Centralville Sewer Separation Project covers the area outlined in Figure 2 and will be divided into two phases. Phase 1 includes the construction of the mainline drain conduit to remove the Humphrey’s Brook and Billings Street Wetlands from the sewer system and entails the installation of a large diameter drain system ranging from 48 inches in diameter to a 5-foot by 6-foot box culvert and a new outfall to the Merrimack River. Phase 2 includes branches off the mainline drain conduit, which encompass over 400 acres of sewer separation. This project delivers both street local flooding mitigation and a reduction in CSO volumes by over 50 million gallons a year.

Meeting EPA mandates, Phase 3 of Lowell's Sewer Separation Program involves both designing and implementing multiple separation projects. By separating stormwater from sanitary sewers, the program aims to minimize the risk of combined sewer overflows during periods of heavy rainfall. The specific sites for these projects will be selected during the design phase, which will evaluate benefits of sewer separation in key areas of the City experiencing frequent street flooding, ensuring that the chosen sites for these projects address the most pressing concerns within the community. Additionally, the implementation of the Douglas Road storage tank is anticipated to effectively alleviate both local surcharging issues and mitigate CSOs in the flood prone Douglas Road and Windward Road area.

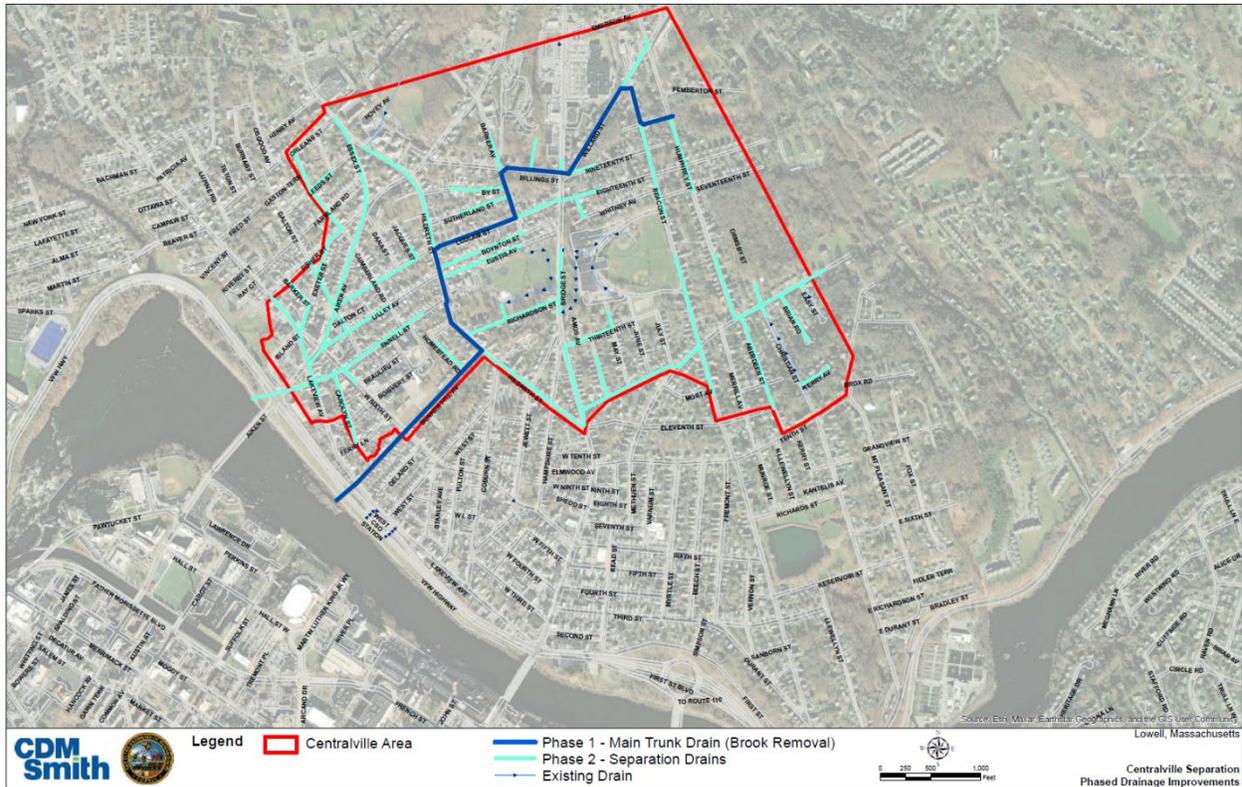
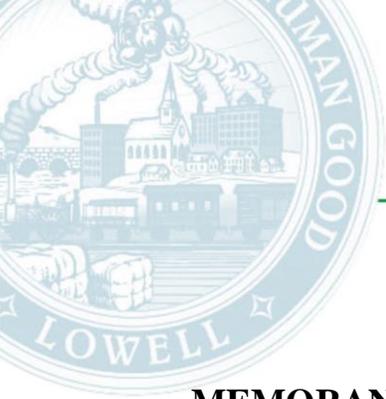


Figure 2 Centralville Sewer Separation Project

The Duck Island Treatment Plant Upgrade project is essential for the Utility to maintain compliance with environmental regulations. It focuses on upgrades to several key areas including the grit & scum removal system, aeration mixers & diffusers, chemical pumping systems, dewatering processing, and electrical upgrades. These improvements aim to modernize outdated equipment, streamline operations, ensure the continued reliability of critical infrastructure, comply with current and future environmental permits, and reduce ongoing operation and maintenance costs.

Successfully executing these projects and programs will demand substantial time and financial commitments from the City. The Utility will continue to leverage the Clean Water State Revolving Fund (CWSRF) loan program, which encompasses both the Bipartisan Infrastructure Law (BIL) and American Rescue Plan Act (ARPA) funding for any qualifying work. The CWSRF is a joint federal-state financing program that provides subsidized loans to improve and protect water quality and public health in the Commonwealth. The CWSRF provides a favorable 1.5% interest rate loan and a potential 10% principal forgiveness for all projects in Lowell. The Utility is also actively seeking Community Project Funding (CPF), grants, and federal earmarks to lessen the financial impact on rate payers.



Conor Baldwin  
 Chief Financial Officer

**MEMORANDUM**

**TO:** Thomas A. Golden, Jr., City Manager

**FROM:** Conor Baldwin, Chief Financial Officer 

**CC:** Austin Ball, Deputy CFO

**DATE:** May 21<sup>st</sup>, 2024

**SUBJECT:** Vote – Authorize \$175 million Loan Order / Rescind \$67 million Loan order– Wastewater Capital

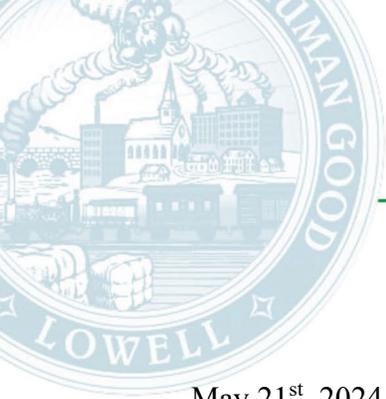
The Wastewater Enterprise Fund is in need of a new loan order of \$175 million for future capital projects relating to a consent decree with the Environmental Protection Agency (“EPA”). Also, the enterprise fund requires a vote to rescind the current loan order of \$67 million, to accompany this new authorization. Of the approved \$67 million loan order, currently \$14.9 remains unspent or unencumbered and that is the amount the Finance Team is proposing we rescind in order to issue this new appropriation. The Executive Director of Wastewater goes into further depth regarding some of the mandated projects that the city is going to be required to complete with the new loan authorization. Below you will see a couple of charts, one is the projected spending schedule until 2029 as well as a forecast provided by the Finance Team.

2025 BUDGETED	2025 PROJECTED	2026 PROJECTED	2027 PROJECTED	2028 PROJECTED	2029 PROJECTED
	12.00%	20.00%	9.00%	9.00%	9.00%
\$22,328,321	\$ 20,400,109	\$ 24,480,131	\$ 26,683,343	\$ 29,084,843	\$ 31,702,479
\$ 1,100,000	\$ 1,158,516	\$ 1,297,538	\$ 1,557,046	\$ 1,697,180	\$ 1,849,926
\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000
\$ -	\$ 3,655	\$ 3,655	\$ 3,655	\$ 3,655	\$ 3,655
\$ 19,000	\$ 16,688	\$ 16,688	\$ 16,688	\$ 16,688	\$ 16,688
\$ 1,614,000	\$ 1,685,025	\$ 1,769,276	\$ 1,857,740	\$ 1,950,627	\$ 2,048,158
\$ 2,105,414	\$ 2,210,591	\$ 2,321,121	\$ 2,437,177	\$ 2,559,035	\$ 2,686,987
\$ 2,325,568	\$ 2,448,906	\$ 2,571,352	\$ 2,699,919	\$ 2,834,915	\$ 2,976,661
\$ 200,000	\$ 237,446	\$ 237,446	\$ 237,446	\$ 237,446	\$ 237,446
<b>\$31,692,303</b>	<b>\$ 30,160,936</b>	<b>\$ 34,697,206</b>	<b>\$ 37,493,013</b>	<b>\$ 40,384,389</b>	<b>\$ 43,522,000</b>
\$ 1,293,879	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>\$32,986,182</b>	<b>\$ 30,160,936</b>	<b>\$ 34,697,206</b>	<b>\$ 37,493,013</b>	<b>\$ 40,384,389</b>	<b>\$ 43,522,000</b>
\$ 4,289,025	\$ 4,289,025	\$ 4,417,696	\$ 4,550,227	\$ 4,686,734	\$ 4,827,336
\$12,387,944	\$ 12,387,944	\$ 12,635,703	\$ 12,888,417	\$ 13,146,185	\$ 13,409,109
\$ 9,209,677	\$ 9,148,744	\$ 8,729,384	\$ 8,639,454	\$ 8,540,966	\$ 8,224,368
\$ -	\$ -	\$ 690,783	\$ 1,649,441	\$ 4,035,161	\$ 6,757,326
\$ -	\$ 317,513	\$ 818,723	\$ 856,371	\$ 167,214	\$ 434,369
<b>\$25,886,646</b>	<b>\$ 26,143,226</b>	<b>\$ 27,292,288</b>	<b>\$ 28,583,911</b>	<b>\$ 30,576,261</b>	<b>\$ 33,652,508</b>
\$ 7,099,536	\$ 7,099,536	\$ 7,312,522	\$ 7,531,898	\$ 7,757,855	\$ 7,990,590
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>\$32,986,182</b>	<b>\$ 33,242,762</b>	<b>\$ 34,604,810</b>	<b>\$ 36,115,808</b>	<b>\$ 38,334,116</b>	<b>\$ 41,643,098</b>
\$ -	\$ (3,081,826)	\$ 92,396	\$ 1,377,204	\$ 2,050,274	\$ 1,878,902
	\$ 1,287,335	\$ (500,612)	\$ (408,216)	\$ 968,988	\$ 3,019,262



Conor Baldwin  
 Chief Financial Officer

		Estimated Cost (millions)	2024	2025	2026	2027	2028	2029
			\$11.08	\$34.57	\$44.85	\$34.08	\$17.94	\$30.24
<b>CMOM</b>								
	CMOM Correction Program							
	CMOM Program Updates	\$0.75						
<b>Infiltration/Inflow Program</b>								
	Annual SSES Design	\$5.1						
	I/I Reduction Projects in Sanitary System	\$18.0						
	<b>Subtotal</b>	<b>\$23.1</b>						
<b>Humphrey's Brook Area Separation Project</b>								
	Preliminary Design	\$1.3						
	Phase 1 Final Design							
	Phase 1 Project Bidding	\$53.9						
	Phase 1 Project Construction							
	Phase 2 Final Design	\$87.9						
	Phase 2 Project Bidding							
	Phase 2 Project Construction							
	<b>Subtotal</b>	<b>\$143.1</b>						
<b>Phase 3 Sewer Separation Program</b>								
	Preliminary Design	\$1.9						
	Implementation Schedule Development							
	Project 1 Design/Construction	\$25.0						
	Project 2 Design/Construction	\$25.0						
	Project 3 Design/Construction	\$25.0						
	Project 4 Design/Construction	\$25.0						
	<b>Subtotal</b>	<b>\$101.9</b>						
<b>Wentworth-Douglas Road CSO Storage</b>								
	Design	\$0.9						
	Bidding	\$9.0						
	Construction	\$9.9						
	<b>Subtotal</b>	<b>\$9.9</b>						
<b>Duck Island WWTP Wet Weather/Capacity Improvements</b>								
	Design	\$1.3						
	Bid							
	Construction	\$28.1						
	<b>Subtotal</b>	<b>\$29.4</b>						
<b>MS4 Compliance Program</b>								
	Stormwater Field Support	\$3.00						
	IDDE Program (Identification and Removal)	\$0.50						
	Phosphorus Control	\$1.00						
	<b>Subtotal</b>	<b>\$4.5</b>						
<b>Misc. Engineering Support/Reporting</b>		<b>\$2.0</b>						
<b>Updated Integrated CSO LTCP</b>		<b>\$2.5</b>						
<b>TOTAL</b>		<b>\$317.1</b>						
<b>Annual Costs</b>								
	CMOM		\$0.5	\$0.25				
	I/I		\$0.7	\$0.4	\$2.6	\$2.6	\$2.7	\$2.6
	Humphrey's Brook		\$1.3	\$5.3	\$30.0	\$18.6	\$1.6	\$15.0
	Sewer Sep		\$2.15	\$1.00	\$5.25	\$12.00	\$13.00	\$12.00
	WWTP		\$5.6	\$17.2	\$6.3	\$0.3		
	Storage		\$0.2	\$9.7				
	MS4		\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5
	Reporting/SCADA		\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20
	LTCP							
	<b>TOTAL</b>	<b>\$317.8</b>	<b>\$11.1</b>	<b>\$34.6</b>	<b>\$44.8</b>	<b>\$34.1</b>	<b>\$17.9</b>	<b>\$30.2</b>
<b>NOTES:</b>								
					<b>\$172.8</b>			



Thomas A. Golden, Jr.  
*City Manager*

May 21<sup>st</sup>, 2024

Mayor Daniel Rourke  
And  
Members of the Lowell City Council

Dear Mayor Rourke and Members of the Lowell City Council,

Enclosed is a vote to authorize a loan order in the amount of \$175,000,000 to appropriate funds to complete the financing necessary to begin the mandated work from the Environmental Protection Agency (“EPA”). The city has been in negotiations with the EPA and has settled on terms of a Consent Decree. The Consent Decree will have a major financial impact on the Wastewater fund in the years to come. To accompany this vote there is also a separate authorized vote to rescind the current \$67 million dollar loan order by approximately \$14.9 million as that is the total that is authorized by unencumbered.

This loan authorization is tied directly to the city’s recent lodged consent decree with the EPA. The need for future rate increases to the wastewater fund to keep pace with this unfunded mandate by the U.S Government will be brought forth as needed by the Finance Team. The city in this consent decree must do a number of different things including sewer separation in the Centralville area, I/I CMOM inspection and repairs, stormwater management planning as well as future sewer separation. The Finance Team and the Wastewater team will work closely together to examine ways to reduce this burden on the residents including, utilizing the Massachusetts Clean Water Trust (“MCWT”) to finance some of this funding as well as examine our current inter-municipal agreements with Tyngsboro, Chelmsford, Dracut and Tewksbury to pass along some of the debt service costs to their respective communities.

Further detailed financial analysis can be found in the Chief Financial Officer’s memorandum.

Sincerely,

Thomas A. Golden, Jr.  
City Manager

CC: Conor Baldwin, Chief Financial Officer  
Aaron Fox, Wastewater Director